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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,951	07/18/2003	Oh-Sang Kwon	SAM-0419	3994
<div>7590 Anthony P. Onello, Jr. MILLS &amp; ONELLO LLP Suite 605 Eleven Beacon Street Boston, MA 02108</div>			<div>EXAMINER NGUYEN, TOAN D</div>	
			<div>ART UNIT 2616</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 06/26/2007</div>	<div>DELIVERY MODE PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/622,951	KWON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Toan D. Nguyen	2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 6, 7 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 2-10 are objected to because of the following informalities:

In claim 2 line 1, it is suggested to change "a home network" to --- the home network ---. Similar problems exist in claim 2 line 1, claim 3 line 1, claim 4 line 1, claim 5 line 1, claim 6 line 1, claim 7 line 1, claim 8 line 1, claim 9 line 1, and claim 10 line 1.

In claim 7 line 5, it is suggested to change "lotates by" to --- rotates by ---.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1-5, and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petry et al. (US 6,538,985) in view of Hwang et al. (US 6,577,598).

For claims 1 and 5, Petry et al. disclose channel reservation media access control protocol using orthogonal frequency division multiplexing, comprising:

(a) assigning a node number to each station and assigning subchannels corresponding to the node number of each station (col. 4 lines 24-27);

(b) the starting station constructing tones corresponding to the subchannels assigned to its own node number and the node number of the destination station as single OFDM symbol, and placing the OFDM symbol in a frame for transmission (col. 4 lines 11-19); and

(c) recognizing the starting station and the destination station (col. 5 line 27, and col. 6 line 11-12)

However, Petry et al. do not expressly disclose stations other than the starting station detecting the tones from the frame, recovering the node number using indices of the subchannels obtained from the tones. In an analogous art, Hwang et al. disclose stations other than the starting station detecting the tones from the frame (col. 8 lines 38-40), recovering the node number using indices of the subchannels obtained from the tones (col. 9 lines 2-4).

Hwang et al. disclose wherein in step (c) a station that determines that it is the destination station receives additional symbols of the frame, while stations other than the destination station do not receive the additional symbols of the frame (col. 8 lines 5-13 as set forth in claim 5).

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One skilled in the art would have recognized the stations other than the starting station detecting the tones from the frame, and would have applied Hwang et al.'s ID symbol in Petry et al.'s LAN node. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Hwang et al.'s methods and apparatus for channel adaptation in a DMT based system in Petry et al.'s channel reservation media access control protocol using orthogonal frequency division multiplexing with the motivation being reflected back the ID symbol of the transmitting node 12a as the retransmitted symbol (col. 9 lines 2-4).

For claim 2, Petry et al. disclose wherein the number of subchannels assigned to each node number in step (a) is calculated by dividing the number of total subcarriers by the number of nodes included in the home network (col. 4 lines 27-32).

For claim 3, Petry et al. disclose wherein the assignments of subchannels in step (a) are performed according to the following equation:

$$D_i = \{(k \bmod d) == DSN\}, k < N/2$$

$$S_i = \{(k \bmod d) == SSN\}, k > N/2, i = 1, \dots, M/2,$$

where N indicates the number of total subcarriers (col. 4 lines 27-32), DSN indicates a node number of the destination station, SSN indicates a node number of the starting station,  $D_i$  indicates an index of a subchannel assigned to the destination station, and  $S_i$  indicates an index of a subchannel assigned to the starting station (col. 5 lines 27-34).

For claim 4, Petry et al. disclose wherein the OFDM symbol is placed in a foremost part of the frame in step (b) (col. 4 lines 2-6).

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For claim 8, Petry et al. disclose wherein the node number detection in step (c) is performed by detecting the node number of a corresponding station by modulo-calculating the indices of the subchannels by the maximum number of nodes constituting the home network (col. 4 lines 27-32).

For claim 9, Petry et al. disclose wherein a node number that is most frequently detected is selected, if the node number is detected at least once (col. 7 lines 6-10).

***Allowable Subject Matter***

5. Claims 6-7, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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